

REMARKS

Status of the claims

Claims 57, 68-71, 87-91, 93 and 96-102 are pending as shown in the paper filed February 26, 2008 and claims 57, 66, 68-71 and 87-90 are under active examination. Inasmuch as withdrawn claims 91, 93, and 96-102 have been amended to contain all of the limitations of the elected composition claims, they are eligible for rejoinder upon allowance of the claims under consideration.

Rejections Withdrawn

The rejection under 35 U.S.C. § 112, 1st paragraph (new matter) has been withdrawn. The rejections under 35 U.S.C. § 102 based on MacKay, Schwechheimer, Knoke, Olivera and Boyes have also been withdrawn.

Obviousness-type double patenting

The examined claims were again variously rejected under the judicially created doctrine of obviousness-type double patenting over 29 different U.S. Patents. (Office Action, pages 6-16).

In response to Applicants' previous arguments that double-patenting rejections are improper when a Restriction Requirement has been imposed as between claims directed to compositions and method claims, the Examiner asserted that no Restriction Requirement had been imposed in the pending case (Final Office Action, page 5; see also, pages 6-8, 10-13, 16-30):

Such is not persuasive. In the instant case only a species requirement was imposed and no restriction was made. Moreover, the various species were rejoined during prosecution.

However, contrary to the Examiner's assertion, Applicants again note that a Restriction Requirement as between compositions (cell comprising complexes) and methods was in fact imposed in the instant case. See, Restriction Requirement mailed April 7, 2004, made FINAL in an Office Action mailed July 26, 2004. The acknowledged presence of a linking claim and/or the fact that Applicants are entitled to

rejoinder of method claims cannot transform a Restriction Requirement into an Election of Species Requirement. Clearly then, the Examiner's assertion that no Restriction Requirement was imposed in the instant case is in error.

In light of the Office's determination that compositions as claimed are distinct from methods which may involve the same compositions, the obviousness-type double patenting rejections are improper. Thus, the rejection over the 27 patents with method claims should be withdrawn. See, also, MPEP § 804.01.

Furthermore, with regard to the two patents that have composition claims (U.S. Patent Nos. 7,163,824 and 7,026,462), Applicants reiterate the arguments previously presented. Nonetheless, submitted herewith is the appropriate terminal disclaimer which obviates the double patenting rejections based on U.S. Patent Nos. 7,163,824 and 7,026,462.

35 U.S.C. §§ 102

Previous claims 57 and 68-71 were again rejected over 18 co-owned U.S. Patents, as applied in the obviousness-type double patenting rejection. (Final Office Action, pages 34-35). In support of this rejection, the Office Action again stated that (Final Office Action, page 34, emphasis added):

As shown in the double patenting rejections above, each of these patents claim embodiments which make obvious the various claimed subject matter. Moreover, the specifications each teach essentially the same subject matter with regard to the artificial proteins and artificial chemicals which bind to the cellular chromatin in the cell and/or outside the cell.

In their Response, Applicants' noted that whether or not the references "make obvious" the instant claims is not the proper standard for determining anticipation. Rather, it was noted that, in the absence of express disclosure, inherent anticipation can only been shown if the complexes inherent in the references are necessarily and inevitably made up of a non-naturally occurring zinc finger protein bound to an accessible region of cellular chromatin. Evidence was also presented regarding how zinc finger proteins were known to bind to non-accessible regions of cellular chromatin.

The Examiner deemed these arguments unpersuasive, stating that each of the patents show binding of a zinc finger protein to cellular chromatin. (Final Office Action, page 35).

Applicants again traverse the rejections and supporting remarks.

It is not disputed that the co-owned references U.S. Patent Nos. 7,235,354; 7,177,766; 7,045,304; 6,989,269; 6,785,613; 6,780,590; 6,777,185; 6,599,692; and 6,453,242 all teach non-naturally occurring zinc finger proteins or that they all teach that such proteins bind to cellular chromatin. However, in maintaining the rejections based on these patents, the Examiner has failed to properly interpret the claimed recitation that the zinc finger protein must be bound to an accessible region in cellular chromatin. In other words, it is not sufficient to show that a reference discloses a cell in which a zinc finger protein is bound to cellular chromatin; the zinc finger protein must be bound in an accessible region of cellular chromatin.

As repeatedly noted throughout prosecution, the term "accessible region" of cellular chromatin is clearly defined as a region which is not packaged in nucleosomes. See, e.g., page 13, lines 11-12. U.S. Patent Nos. 7,235,354; 7,177,766; 7,045,304; 6,989,269; 6,785,613; 6,780,590; 6,777,185; 6,599,692 are silent as to accessible regions entirely. These references also fail to show that their engineered zinc finger proteins are necessarily and inevitably bound to an accessible region of cellular chromatin. Rather, as demonstrated in Zhang et al. (Ref. C5 of IDS filed August 22, 2006 and considered November 10, 2006), engineered zinc finger proteins as disclosed in the references have been shown to form complexes with non-accessible regions of cellular chromatin. In addition, as previously noted, Wong et al. (1997) (Exhibit A of Response filed July 6, 2005 and Ref C4 of IDS filed August 22, 2006 and considered November 10, 2006) and Cirillo et al. (1998) (Exhibit B of Response filed July 6, 2005 and Ref C1 of IDS filed August 22, 2006 and considered November 10, 2006) establish that naturally occurring transcription factors also do not necessarily bind to accessible regions of cellular chromatin. Thus, it has not been shown to be inherent in these references that any engineered zinc finger protein will necessarily and inevitably be bound to an accessible region of cellular chromatin, as claimed.

In sum, when the claims are properly construed and every term given its proper meaning, it is clear that U.S. Patent Nos. 7,235,354; 7,177,766; 7,045,304; 6,989,269; 6,785,613; 6,780,590; 6,777,185; 6,599,692; and 6,453,242 do not anticipate, expressly or inherently, cells as claimed.

With respect to U.S. Patent Nos. 7,220,719; 7,163,824; 7,013,219; 6,979,539; 6,933,113; 6,824,978; 6,689,558; 6,607,882; and 6,534,261, Applicants submit a Declaration of Inventorship signed by the inventor (Casey C. Case) common to the instant application and all of cited patents, establishing that any subject matter disclosed but not claimed in U.S. Patent Nos. 7,220,719; 7,163,824; 7,013,219; 6,979,539; 6,933,113; 6,824,978; 6,689,558; 6,607,882; and 6,534,261 was derived from the inventors of this application and, therefore, is not the invention of another.


For the foregoing reasons, withdrawal of the rejections is in order.

CONCLUSION

For the reasons set forth herein, allowance of the claims under consideration, and rejoinder and allowance of the withdrawn claims, are requested.

Respectfully submitted,

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